

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in this application:

### **Listing of Claims**

1. (Currently amended) A method of characterizing a mixture of components, the method comprising the steps of:

obtaining a plurality of spectrochromatograms of the mixture of components, each of the spectrochromatograms being obtained under a respective one of a plurality of different chromatographic conditions, each spectrochromatogram comprises a plurality of absorbance values;

estimating the number of components and

performing spectral component matching upon the spectrochromatograms using the estimated number of components and the plurality of absorbance values.

2. (Currently amended) The method of claim 1 further comprising the step of determining each component retention time ~~in response to~~ using results of the spectral component matching.

3. (Currently amended) The method of claim 1 further comprising the step of determining each component spectral shape ~~in response to~~ using results of the spectral component matching.

4. (Original) The method of claim 3 further comprising the step of using the component spectral shape to identify the component.

5. (Original) The method of claim 1 further comprising the step of resolving at least one component in the mixture of components.

Claims 6-13. (Canceled)

14. (Currently amended) A method for resolving a mixed sample of chromatographic components, the method comprising the steps of:

selecting a plurality of differing chromatographic conditions;

performing a plurality of chromatographic runs on the mixed sample, each respective run performed under a respective chromatographic condition;

obtaining spectrochromatographic data for the mixed sample during each of the chromatographic runs, the spectrochromatographic data comprising a plurality of absorbance values;

creating an augmented data set from the spectrochromatographic data of the plurality of chromatographic runs;  
operating on the augmented data set to determine the retention times for each component in the mixed sample; ~~and~~  
performing spectral component matching upon the spectrochromatographic data; and  
resolving each of the components.

15. (Original) The method of claim 14 further comprising the step of performing component quantitation.

16. (Original) The method of claim 15 wherein the step of performing component quantitation uses resolved spectra and concentration profiles.

17. (Original) The method of claim 14 further comprising the step of finding peak relative areas using concentration profiles.

Claims 18-19. (Canceled)